

# STATE OF MONTANA

## JOB DESCRIPTION

*Montana state government is an equal opportunity employer. The State shall, upon request, provide reasonable accommodations to otherwise qualified individuals with disabilities.*

**Job Title: Survey Project Manager**      **Position Number: 35007, 35008, 35011**

**Location: Helena**      **Department: Transportation**

**Division and Bureau: Engineering/Highways Bureau**

**Section and Unit: Photogrammetry and Survey Section**

### **Job Overview:**

The Survey Project Manager is a senior professional land surveyor (PLS) for the MDT's Photogrammetry and Survey Section. This position is responsible for developing, implementing and maintaining special statewide survey subprograms: developing, planning and implementing statewide land survey methods, procedures, technology and operations for the MDT; planning and performing professional survey work; coordinating survey review and approval for quality control purposes; developing and overseeing training for field survey crews; and directing and coordinating the operation and maintenance of survey equipment. The Survey Project Manager is in responsible charge of all survey work being performed under their PLS license. The position reports to the Land Survey Manager.

### **Essential Functions (Major Duties or Responsibilities):**

#### **Project Management - 40%**

- Plans and performs a variety of advanced professional survey and project management duties in support of ongoing land survey projects and operations.
- Directs and oversees the research of public and private records to recover title, monument, and/or other survey histories pertinent to the survey being conducted. Evaluates recovered records and determines how the information is to be utilized.
- Directs and coordinates land surveys to establish lost or obliterated property and property controlling corners.

- Directs and oversees the investigation and recovery of field evidence to establish reference points and determine boundary and/or monument locations.
- Plans and conducts surveys involving technically complex, contentious, and/or legally sensitive issues to ensure the highest standards of quality and efficiency are applied to critical projects. Coordinates with District and headquarters staff and others as necessary to assess the nature and context of survey projects, develops strategies to accommodate specialized needs and requirements, and serves as a technical authority on land survey issues. Provides technical expertise and consultation to other work units to resolve advanced technical and procedural problems associated with various survey procedures and results.
- Directs and oversees survey information management system operations to ensure that survey data is effectively maintained and distributed to appropriate stakeholders.
- Solves problems that arise during surveys.
- Using sound judgment and business practices organizes, computes, adjusts, applies case law and analyses collected field data to make survey related decisions. Directs the preparation of reports, maps, certificates of surveys, corner recordations etc. in accordance with statutory requirements to document decisions and findings related to land surveys.
- Oversees the maintenance of the National Geodetic Survey (NGS) vertical control network by replacing or providing direction to others to replace bench marks, running levels in accordance with NGS specifications, and preparing level data for submission to NGS.

### **Survey Program Development & Administration - 30%**

- Develops, plans, and implements statewide land survey methods, procedures, technology, and operations for all types of MDT survey projects. Coordinates land surveying services on a statewide basis to assure consistency and effectiveness of those services.
- Conducts research to develop and implement new survey methods, procedures, and technologies to improve the efficiency and cost-effectiveness of statewide survey program operations and activities.
- Coordinates and directs the implementation of new technology, special projects, and other survey activities according to specific Department and project requirements. Develops, tests, and implements new survey procedures and equipment in coordination with survey and construction crews to implement cost and time-efficient methods and procedures, including new technology, into the survey program.
- Directs, plans, and oversees the delivery of statewide land survey systems and procedures on assigned projects to ensure compliance with state and federal regulations and responsiveness to broader construction project priorities, timelines, and requirements. Assesses statewide construction processes, planned and active projects, land survey practices, and field dynamics; consults with District construction and survey staff to determine available resources and priorities; identifies potential impacts with program or

system changes; and develops long-term project strategies for ensuring the quality, efficiency, and cost-effectiveness of projects.

- Develops land survey system processes, specifications, and standards that promote consistency and efficiency and agree with state and federal requirements for recommendation to the Land Survey Manager.
- Develops, implements and provides ongoing oversight and management of specialized statewide survey subprograms (e.g. data collection, machine control, height modernization, etc.).
- Manages multiple concurrent survey projects and workflow processes to ensure efficiency, cost-effectiveness, and consistency with construction project timelines. Coordinates with multiple districts, other Photogrammetry/Survey staff, local/regional government agencies, and other stakeholders to optimize project resource allocations, schedules, and procedures.
- Monitors assigned land survey projects to ensure they remain on schedule and that all required activities are completed in the proper sequence.
- Maintains liaisons with District offices; other MDT bureaus and divisions; and miscellaneous state and local agencies to coordinate activities, explain projects, and resolve conflicts.
- Identifies and determines training and support needs of MDT survey and construction crews by gathering input from the Districts and other bureaus. Prepares, presents, or coordinates training as directed by the District Land Survey Managers and/or the Land Survey Manager to ensure implementation of modern technologies and operational strategies and to ensure staff competencies in developmental methods, procedures, and technologies.
- Coordinates and performs public relations and information dissemination activities to provide survey related information to landowners, solicit parol evidence of original boundary locations from landowners, obtain permission for property access, and to identify and resolve survey related complaints and concerns.
- Provides technical assistance to other Survey Unit staff, District Surveyors and/or District survey crews on new standards, specifications, technologies, and survey policies and procedures including coordinating and delivering advanced technical assistance, systems, and procedures to District survey crews on the adjustment and operation of survey equipment, methods for troubleshooting surveys, survey policy and procedure applications, and other issues to ensure optimum program performance.
- Provides expert guidance and assistance to design and engineering staff on construction projects and recommends changes that should be made on future contract plans to correct survey and ROW difficulties and to improve the efficiency of the project planning and delivery process.

### **Survey Review and Approval - 10%**

- Directs and coordinates survey review and approval procedures to ensure quality, consistency, efficiency, and compliance with standards and policies. Surveys types include

geodetic control, project control, photogrammetric control, hydrographic, topographic, legal, land (cadastral), retracement, quality control, construction, and others.

- Directs and performs survey reviews to determine the acceptability of surveys and resolve deficiencies; and oversees survey information management and distribution processes. Provides initial approval for surveys after evaluation and resolution of deficiencies, inconsistencies, and procedural impediments.
- Reviews surveys for soundness of approach, compliance with MDT survey procedures, and compliance with state and federal laws. This position reviews all types of control and cadastral surveys requiring assessment of the quality and accuracy of survey data submitted, the soundness of decisions made, the reliability of methods used along with a multitude of other variables used for each survey.
- Determines the validity of evidence and methods used in reestablishing corner positions, reviewing accompanying legal documents (i.e. corner recordations, certificates of survey), making final computations and adjustments, and organizing and outlining survey information in a format usable by others.
- As a PLS, provides expertise and consultation with the ability to review and modify legal documents, exhibits, property descriptions, ROW plans, etc to ensure the accuracy and compliance of all documentation.

### **Survey Crew Oversight and Training - 10%**

- Oversees and trains field survey crews to ensure the timely and efficient collection and recordation of survey data.
- Directs and oversees surveys to ensure survey data is collected in the proper sequence and manner to support survey and project development operations.
- Determines required survey, documentation, and data collection activities for projects. Compares these requirements to available staff and their related expertise/abilities to determine how to complete projects.
- Reviews survey requests to determine manpower, time, equipment and informational data needed to complete the survey. Determines duty assignments on the site and provides oversight.
- Observes survey crews to determine compliance with established methods and techniques, and survey and recording requirements. Notifies personnel or appropriate supervisor of improper practices or safety concerns. Reports on performance to the supervisor on a daily basis and as part of the formal evaluation process.
- Provides technical assistance to survey crews on adjustment and operation of survey equipment to assure the full potential of the equipment is being realized.
- Identifies survey crew training and development requirements through review of work products and oversight of operations, and develops approaches to meet these needs.

### **Equipment Maintenance - 5%**

Directs and coordinates the operation and maintenance of survey equipment within the Section, including vehicles, electronic total stations, theodolites, engineering levels, digital levels, data collectors, CADD workstations, automated systems, GPS survey equipment, and other tools and technologies to ensure effective operations.

### **Other Duties - 5%**

Performs a variety of other duties as assigned in support of Section, Bureau and MDT goals and objectives.

### **Supervision**

The number of employees supervised is: Indirectly oversees staff in the development and maintenance of specialized projects and subprograms. Provides oversight of field crews on survey projects.

The position number for each supervised employee is: varies

### **Physical and Environmental Demands:**

Work may be performed in an office setting or in the field on construction projects. Duties may be performed on active construction sites in close proximity of heavy equipment, hot asphalt, and high-speed traffic.

### **Knowledge, Skills and Abilities (Behaviors):**

Predominant work of the position requires advanced professional knowledge of the concepts, principles, and developmental applications of land surveying and related mathematics (e.g., geometry, trigonometry, statistics, etc.); legal principles, guidelines, and precedents related to surveying (e.g., Montana Subdivision and Platting Act, Sanitation in Subdivisions Act, Uniform Standards for Monumentation, etc.); case law related to property boundaries; survey computation and data analysis; State and federal survey policy and procedures; and specialized applications of various instrumentation. The position also requires knowledge of specialized information system operations (e.g., OPX-2, etc.); GPS/GIS applications; and supervisory practices and techniques.

This position requires skill in directing, organizing, and coordinating multiple staff and complex projects; examining, interpreting, and translating technical/legal information to broad audiences,

use of standard office software applications (e.g., word processing, database, etc.), and strong written and verbal communications. This position also requires skill in the use of specialized surveying equipment such as electronic total stations, theodolites, engineering levels, digital levels, data collectors, CADD workstations, automated systems, GPS survey equipment, and other tools and technologies.

**Minimum Qualifications (Education and Experience):**

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to a Bachelor’s degree in land surveying or geomatics or related field.

This position requires a minimum of six years experience, two of which must be progressively responsible professional land survey experience including experience with full project oversight.

Certifications, licensure, or other credentials include: Requires Montana Professional Land Surveyor (PLS) license

Alternative qualifications include: Any combination of additional related work experience and education equivalent to the minimum qualifications.

**Special Requirements:**

*List any other special required information for this position*

- |  |  |
|--|--|
| <input type="checkbox"/> Fingerprint check | <input checked="" type="checkbox"/> Valid driver’s license |
| <input type="checkbox"/> Background check  | <input type="checkbox"/> Other; Describe                   |
| Union Code                                 | Safety Responsibilities                                    |

The specific statements shown in each section of this description are not intended to be all inclusive. They represent typical elements and criteria considered necessary to perform the job successfully.

**Signatures**

My signature below indicates the statements in the job description are accurate and complete.

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<b>Immediate Supervisor</b>	<b>Title</b>	<b>Date</b>
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**Human Resources Review**

**Job Code Title: Surveyor 3**

**Job Code Number: D12013**

**Level 3: 3**

My signature below indicates that Human Resources has reviewed this job description for completeness and has made the following determinations:

FLSA Exempt

FLSA Non-Exempt

Telework Available

Telework Not Available

Classification Complete

Organizational Chart attached

**Human Resources:**

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**Signature**

**Title**

**Date**